

RCRA Compliance Evaluation Inspection

Norquay Technology Incorporated

Mailing: P.O. Box 468
800 West Front St.
Chester, PA 19013

RCRA Identification No. PAD982363889

Large Quantity Generator
NAICS Code: 325199

Date of Inspection: July 30, 2013

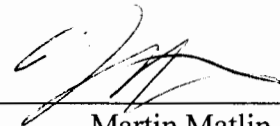
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Martin Matlin
August, 2013

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1.0 Introduction

On July 30, 2013, the United States Environmental Protection Agency, Region III (EPA), Land and Chemicals Division, Office of Land Enforcement conducted an unannounced Compliance Evaluation Inspection (CEI) under the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. Sections 6901 et seq. of Norquay Technology Incorporated ("NTI" or "the facility"). EPA representative Martin Matlin was accompanied by Pennsylvania Department of Environmental Protection (PADEP) representative James Horan. The facility was represented by Jim Hogate, Project Engineer and Eric Logan, Production Manager. Josephine Martin, Project Manager for IES Engineers, environmental contractor for the facility, joined the inspection part way through.

The inspectors entered the facility at 8:55 a.m. and presented credentials to the receptionist. The inspectors were then led to a conference room where the purpose of the inspection was explained.

The inspection included an evaluation of the facility's processes and its compliance with RCRA and the federally authorized Pennsylvania Hazardous Waste Code. All information included in this report is the result of statements by the facility representatives, materials shown to the inspector by the facility representatives and/or documents provided by the facility representatives to the inspectors at the time of the inspection. In addition, information gathered prior to the inspection from a review of EPA and State records may be included in this report.

2.0 Facility Background Information

2.1 Description of Facility

NTI was established in 1987 and is a privately-held company owned by Robert Heldt, who is also the President. There are about 23 employees working three shifts, five days per week. NTI is a batch specialty chemical manufacturer for various types of industries including plastics, medical, pharmaceuticals, photographic, and electronic.

2.2 Permit Status

NTI is currently reporting as a RCRA Large Quantity Generator and does not have a RCRA permit. The facility maintains an Air Permit which covers three manufacturing areas onsite. No underground storage tanks are present.

2.3 Process Description

NTI uses hundreds of different chemicals as raw materials, depending on the client's need and/or product formulation. Many types of solvents are used as well, including acetone, toluene, hexane, heptane, methanol, etc. Each compound is produced on a batch basis, with the basic process consisting of adding raw materials to water, mixing with solvent(s), applying heat, then draining or distilling the final product, which may also be dried.

3.0 Hazardous and Non-Hazardous Waste Generation

The following waste streams are classified as hazardous or non-hazardous according to the facility's generator knowledge:

- **Solvent waste:** spent solvent is drained or distilled from reactor tanks, or flushed through during cleaning. This is collected in drums and sent offsite as Hazardous Waste (HW).
- **Spent/expired chemicals:** the facility periodically goes through their inventory and lab supply, and may ship expired chemicals offsite as HW.
- **Process wastewater:** wastewater from reactor batches is sent through pH neutralization and into storage tanks, about 6,000gal/week. It is hauled offsite as non-HW.
- **Spent PPE/towels:** PPE and solvent cleaning towels/wipes are either collected in a satellite container as HW (in Reactor Room) or disposed of in the trash.
- **Used oil:** a small amount is generated from servicing pump equipment onsite and is stored in drums before being sent offsite for recycling.
- **Universal Waste:** spent fluorescent lamps are stored in the Final Warehouse and sent offsite for recycling.
- **E-Waste:** the facility has had several CRTs removed for recycling; some older computers are currently being stored onsite due to security concerns.
- **Aerosol cans:** a small amount of aerosol cans are used onsite and appear to be disposed of in the trash when spent.

4.0 Hazardous Waste Storage

The facility maintains one primary less-than-90-day storage area in the Final Warehouse. Satellite areas are present in the Reactor Room and labs.

5.0 Inspection Observations

The tour of the facility began at 9:30 a.m. and resulted in the following observations:

5.1 Dryer Rooms

Two dryer rooms are located adjacent to each other. In one room a "double cone dryer" is present, and an open container of spent gloves and towels was found here (see Attachment 1, Photographic Log, Photographs 1 & 2). The representative stated that between batches the dryers are cleaned by hand with solvent-soaked rags (usually iso-propyl alcohol or acetone), which are placed into this container prior to being disposed of with the plant trash. In the other dryer room were two dryers: a tray dryer (individual trays are taken to the Production Room to

be cleaned) and an “FKM” dryer, which is usually not cleaned.

5.2 Production Room

This room contains ten reactors used for batch chemical production. A series of trenches are found on the floor of the room which are designed to contain spills and wastewater, and must be manually pumped out. At the time of the inspection one metal can labeled as containing HW was found at the doorway (Photos 3-5). It contained used gloves and other clean-up material, was dated 7/17/13, and its lid was partially ajar (Photo 4). According to the representative, when full its contents would be placed into a 55gal drum in the Final Warehouse.

When collecting solvent waste from the reactors, depending on the product the waste may be taken from the bottom or top of the reactor. It is placed into up to eight 55gal drums which are transferred to the Warehouse either individually when full or collectively at the end of the shift. If the reactor is cleaned only about half of a drum of HW solvent is generated. A filter dryer centrifuge is also located in this room. See Photo 6 for an overall view of the right side of this room: the centrifuge is seen at left center, and the white and blue drums on the right are collecting wastewater from two reactors.

Also found in this room were two 55gal drums labeled “solvents for cleaning” and dated 7/29/13. The representative said these contained used solvent which may be used again, and asked that photographs of them not be taken.

5.3 R&D Lab

This laboratory is used to test new and current products. One 5gal container was found in a spill tray on the floor (Photos 7 & 8). It was labeled as HW “mixed solvent waste” and as D001, F003 and F005; and dated 2/20/12. When full its contents would be transferred to another “satellite” area outside the door, according to the facility.

5.4 Utility Room

Wastewater pumped from the Production Area trenches ends up in a pH neutralization tank and holding tank here, before being pumped to storage tanks in the Equipment Storage Room.

Also found in this room were four 55gal drums on a spill pallet, all labeled as HW “mixed solvent waste” and as D001, F003 and F005 (Photo 9-12). One drum was dated 6/26/13 (Photo 10), one dated 7/30/13 (Photo 11), and two were undated (Photos 12 & 13). The representative stated they were generated from either the Reactor Room or R&D Lab next door, and when full would be moved to the Final Warehouse. All of them felt fairly full at the time of the inspection, and the facility was unsure of when the undated drums had been generated.

5.5 Acid Storage Room

This room primarily contained many drums and totes of raw materials. However, next to

some cabinets there was a rolling cart filled with several bottles and small containers (Photo 14). Mr. Hogate stated that he believed the containers were pulled during the last shutdown about two weeks prior. A representative for this area, Mr. Pete Litak, R&D Manager, was called over and explained that the material on the cart was removed from the labs about two months ago and was planned to be disposed of as HW. None of the containers were labeled as HW or dated as to when they became waste.

Next to this cart were cabinets containing many other smaller containers of chemicals still considered in use (Photos 15 & 16). Mr. Logan stated that he believed these were primarily being used in the labs.

5.6 Equipment Room

This room contains four above-ground storage tanks (ASTs) all labeled “Residual Waste” (Photos 17 & 18). Three of the tanks were stated to have a 5,000gal capacity and one 2,500gal. According to the representative, wastewater is pumped here from the pH neutralization tank in the Utility Room. These tanks are then pumped through a nearby bay door to a tanker truck for disposal.

5.7 Maintenance Room

Typical maintenance and equipment-related activities occur in this room. An open, unlabeled 5gal bucket contained what appeared to be a spent aerosol can labeled “Uline Fast Track Adhesive” (Photos 19 & 20). One in-use aerosol can was also found on a nearby shelf, labeled as “Rust-Oleum Inverted Striping Paint” (Photo 21).

5.8 Final Warehouse

At this point the inspectors were joined by Ms. Josephine Martin, Project Manager for IES Engineers, the facility’s primary environmental contractor. This room contained many drums of products, as well as two double rows of HW drums on pallets (Photo 22). Arranged along the Warehouse’s south wall there were about 40 x 55gal drums on two left-side rows of pallets and 39 drums on two right-side rows. Some observations of these drums follow:

- one 55gal drum towards the rear of the right-side rows was not dated (Photos 23 & 24)
- three drums in the front of the right-side rows were not labeled as HW or dated (Photo 25)
- one drum towards the rear of the right-side rows, being between several other drums, no label could be seen on it (Photo 26)
- two 55gal drums towards the rear of the left-side rows were not dated (Photos 27 & 28)
- on one drum towards the rear of the left-side rows it was unclear if the accumulation date was 4/24/13 or 7/24/13 (Photo 29)
- two additional drums in the rear of the left-side rows were undated (Photos 30 & 31)
- two drums located in the middle of the left-side rows were also undated (Photos 32 & 33)
- two drums near the front of the left-side rows were undated (Photos 34 & 35)
- labels could not be seen on three drums in the middle of the left-side rows (Photo 36)

Next to the left-side rows of 55gal drums were several smaller containers, also on pallets. These included four approximately 20gal containers labeled as "MDN," "Malonitrile," "Poison," and "Do not inventory" (Photo 37). The representative stated that these were waiting for the intended customer to decide if they should be shipped back for use or disposed of, and was not sure of when they had arrived here. One of these containers was additionally labeled "Physical Count Date: March 31, 2004."

Also found in this area were several containers described as being older raw materials by the facility. These included some with corroded and or broken containers (Photos 37-39).

Eight fiber containers were also found here, five of which appeared to be open (Photos 40-46). All were labeled as "Poisonous Solids" and "U.N. 2811." Mr. Logan stated that he believed they were older raw materials that the chemists are still deciding whether or not they may be used. One of the open containers had a final "Inventory Control" date in 2005 (Photos 41 & 42), while another had a final "Inventory Control" date in 2009 (Photos 43 & 44). Another open container had what appeared to be a spent aerosol can of "Maintenance Choice" paint sitting on top (Photo 46).

Next to these containers was a single pallet containing four more 55gal drums, two of which were labeled as HW and two which did not have labels (Photo 47).

One 55gal drum labeled as HW was also found in a separate nearby area with a sign describing it as the "Quarantine Area" (Photo 48). The facility stated that normally this area is used to hold incoming raw materials only, but that the HW drum was placed here as overflow.

Found near these drums was the facility's Universal Waste (UW) storage area for lamps (Photo 49). One closed cardboard box was found, labeled as UW lamps and dated 11/6/12. Three other boxes of used lamps were found open and unlabeled. Additionally, three loose lamps were found on the floor behind these boxes, on top of another open and unlabeled box of used lamps (Photos 50 & 51).

5.9 QC Lab

Two HPLC machines are located here, which generate a methanol/water HW. Two small bottles were found collecting this waste, and were both closed and labeled. According to the facility, at the end of each day the contents of the bottles are poured into a larger four-liter bottle under a chemical hood. At the time of the inspection this container was labeled as "Methanol waste from HPLC" and contained an open funnel (Photos 52 & 53). The representative stated that other small process samples may be generated here and end up either as HW or combined with the facility's aqueous waste stream. He also stated that glassware in the lab is typically washed with detergent only.

6.0 Records Review

6.1 Manifests and LDR Forms

Manifests and Land Disposal Restriction (LDR) forms were reviewed for 2012 and 2013 only, as no previous manifests were found. Manifests were typically signed by Sean Pinkett. Several manifests in 2012 were found to be missing their TSD-signature, including the following:

Manifest #	Shipment Date
005239573	5/21/12
005239572	5/21/12
008533486	3/23/12
005239346	3/8/12
008543429	1/19/12
008543531	2/14/12
005239130	2/6/12
004835048	1/13/12
005239284	2/20/12
005239281	2/17/12
005239345	3/8/12
005239344	3/8/12

Additionally, no LDR form was found for F003/F005 waste going to Clean Harbors in El Dorado, Arkansas (ARD069748192). Copies of the above manifests are found in Appendix 2.

The facility also sends its treated wastewater out by truck to Environmental Recovery Corporation (ERC). Non-HW manifests for this waste stream were reviewed for the period of 1/10/13-7/26/13, and described shipments of approximately 6,000gal per week.

6.2 Inspection Records

Inspection logs were reviewed for the period of 2011 through 7/26/13. They included review of HW containers and whether they were open or leaking, their condition, their dates and labeling, as well as the surrounding area and spill equipment. Separate sheets were found for the "Warehouse," "Reactor Room," and "Satellite Area," and all appeared to be conducted and initialed by Sean Pinkett. Logs were not found between the following dates in 2013: 6/7-6/21, 3/22-4/19, and 1/4-1/29. In 2012 no logs were found prior to 5/17, and logs appeared to be missing between the following dates: 6/29-7/20, 7/20-8/3, 10/19-11/2, 11/2-11/16, and 11/16-12/21. The representative stated that he believed inspections were conducted on those missing days, and that they just failed to document them. He also stated that plant shutdowns typically occur the first two weeks in July and during Christmas. Copies of logs may be found in

Appendix 3.

6.3 Contingency Plan

The facility maintains elements of the RCRA Contingency Plan in a “PPC Plan” written by IES Engineers and dated October 2012, and an “Emergency Response Plan” last updated December 2012. The primary Emergency Coordinator is listed as Mr. Hogate, with alternates being Mr. Logan and Robert Heldt, the President. Names and phone numbers for each are included, but no addresses.

The PPC Plan states that arrangements with local authorities must be made, but does not include any specifics or follow-up. The ERP states that such arrangements would be found in the “Delaware County Emergency Operations Plan,” although the facility stated that this document has not been finalized by the Planning Commission for several years. No other evidence was found that arrangements had been made, or that the plan had been shared with local authorities. Excerpts of the PPC Plan and ERP are found in Appendix 4.

6.4 Training

Although no list is maintained by the facility specifying which employees are required to receive RCRA training, the representative stated that it is typically given to all Operators. A job description for “Chemical Operator” was found, although it did not appear to mention HW or RCRA responsibilities.

The facility maintains sign-in sheets for annual training that is described as including the topics “RCRA Large Quantity Generating Facilities,” “Hazardous Waste Determination,” and “Hazardous Waste Disposal.” Sign-in sheets were found dated 1/24/13, 3/22/12, and 4/5/11. After reviewing the sign-in sheets and the list of operators, as well as the list of designated Emergency Coordinators, it appeared that the following employees were not found on the specified year’s sheets:

- 2013: Lynn Bauman, Markese Clay, Robert Heldt
- 2012: Markese Clay, Robert Heldt
- 2011: Markese Clay

Copies of the sign-in sheets, as well as the job description for “Chemical Operator” are found in Appendix 5.

6.5 Waste Analyses/Profiles

The facility maintains several waste profiles recorded by Clean Harbors which are reviewed annually, according to the representative. Profiles found included “Mixed Solvent Waste” which is described as HW D001, F003 and F005; and “PPE from Process Operations,” described as HW F003 and F005.

Also found was a profile for “Non Haz Wastewater,” which was determined as non-HW, although no analysis was included. According to the facility, ERC requires that this wastewater

be non-flammable, have a pH of 5-9, Total Suspended Solids less than 5%, no chlorinated compounds, and halides less than 10ppm.

6.6 Biennial Reports

Biennial reports were reviewed for the years of 2011 (w/cover letter from Ryan Haas of IES Engineers, dated 2/24/12) and 2009 (w/cover letter from Joseph Rambo of IES Engineers, dated 2/25/10). For both years the facility reported as a Large Quantity Generator, and no concerns were noted.

6.7 Post-Inspection Communication

In an email dated August 9, 2013, Mr. Hogate forwarded several documents/information related to the inspection, including the following: electronic versions of the PPC Plan and ERP, TSD-signed copies of manifests obtained from the TSD post-inspection, a letter sent to the Chester Fire Department describing follow-up from a previous visit to the facility by FD personnel, inspection records just prior to the EPA inspection date, and a company memo dated 8/2/13 which specified that spent aerosol cans must be placed into HW containers. The email also described some changes made onsite subsequent to the inspection. A copy of the email without its attachments is found in Appendix 7.

7.0 Attachments

1. Photographic log
2. Hazardous waste manifests
3. Inspection Logs
4. Excerpts of PPC Plan and ERP
5. RCRA training sign-in sheets and Chemical Operator job description
6. 8/9/13 email from Jim Hogate

Attachment #1

Photographic Log
Norquay Technology Incorporated PAD982363889
Inspection Date 7/30/13



Photograph 1: Open container of trash in Double Cone Dryer Room



Photo 2: Contents of Photo 1 container

Photographic Log
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Inspection Date 7/30/13



Photo 3: Hazardous Waste (HW) container in Production Room



Photo 4: Close up of lid on Photo 3 container – slightly open

Photographic Log
Norquay Technology Incorporated PAD982363889
Inspection Date 7/30/13



Photo 5: Contents of Photo 4 container



Photo 6: View of right side of Production Room, centrifuge at center left

Photographic Log
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Photo 7: 5gal HW container in R&D Lab



Photo 8: Label on Photo 7 container

Photographic Log
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Inspection Date 7/30/13



Photo 9: HW collection area in Utility Room – four 55gal drums

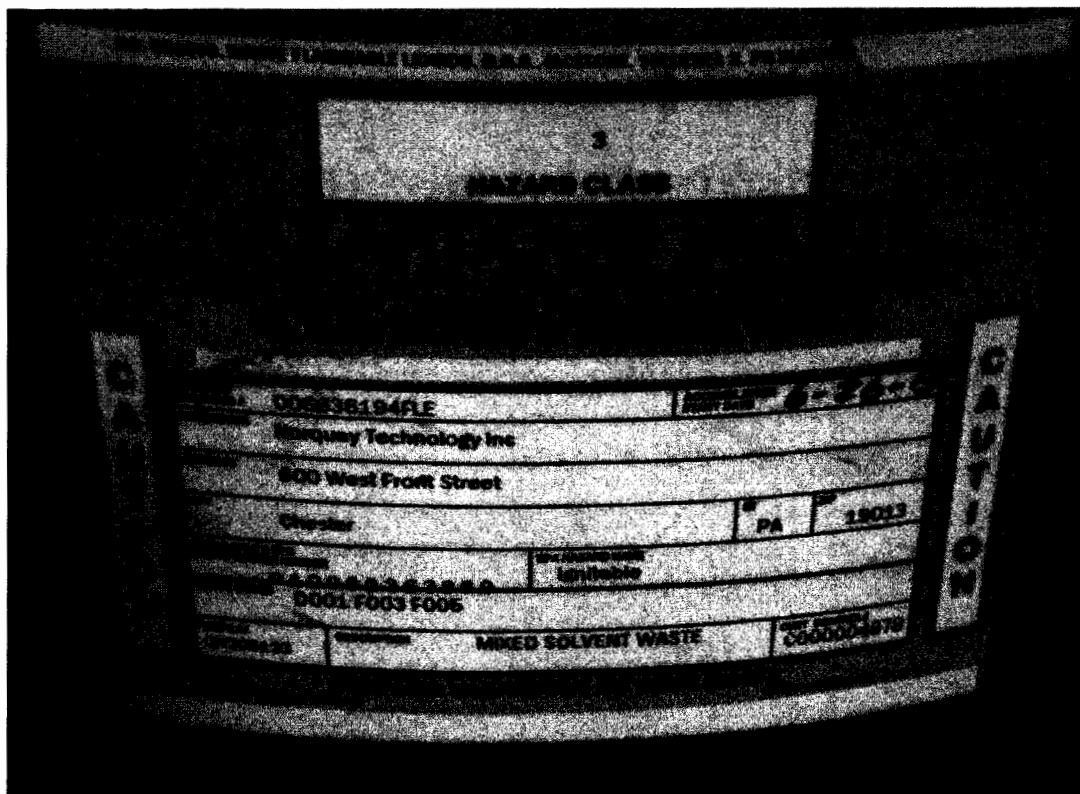


Photo 10: Label on Photo 9 front left drum

Photographic Log
Norquay Technology Incorporated PAD982363889
Inspection Date 7/30/13

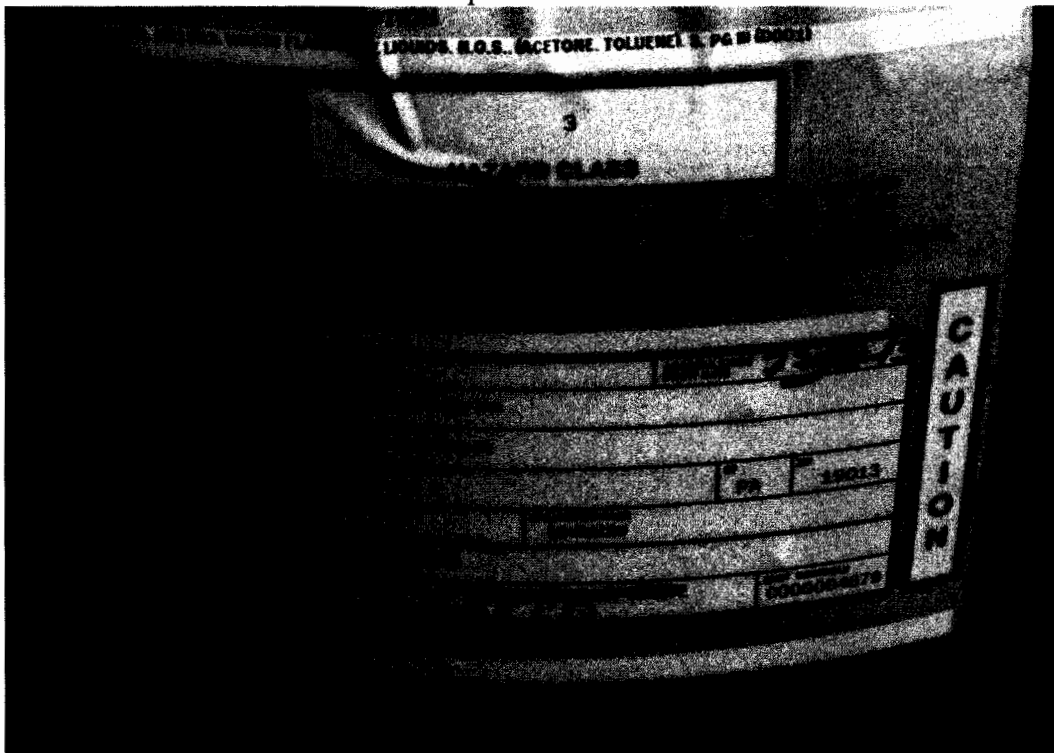


Photo 11: Label on Photo 9 front right drum

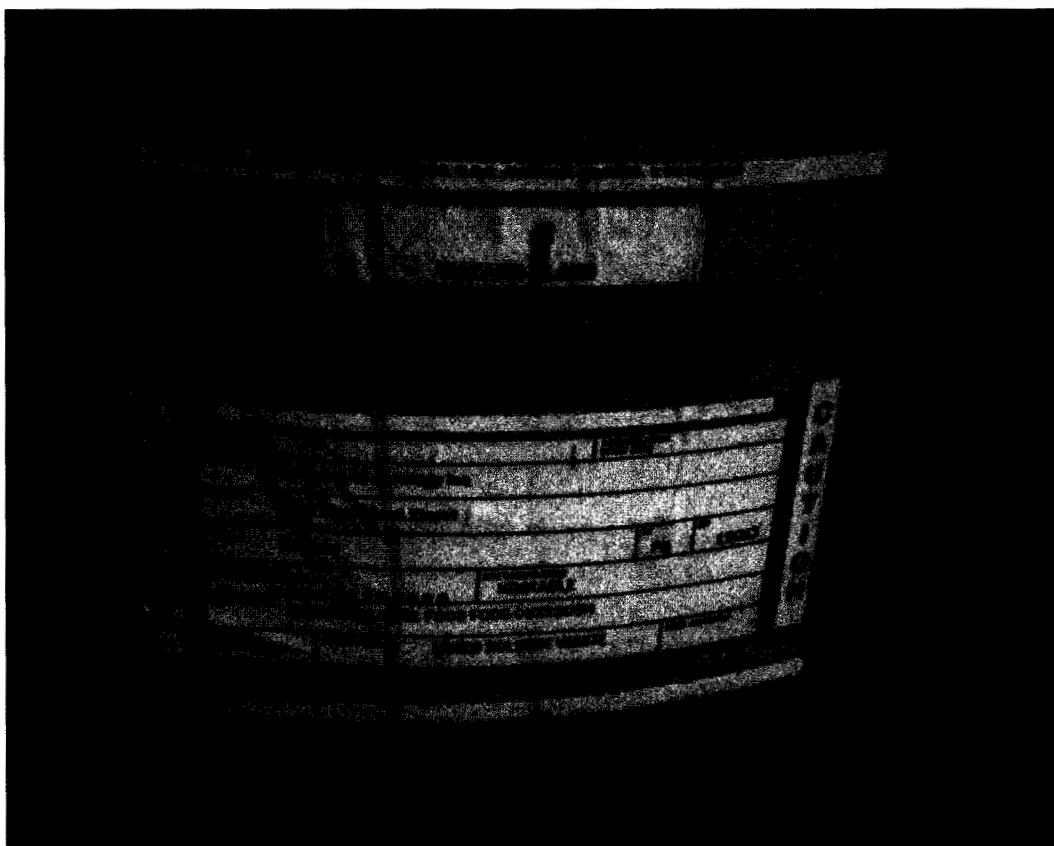


Photo 12: Label on Photo 9 rear left drum

Photographic Log
Norquay Technology Incorporated PAD982363889
Inspection Date 7/30/13

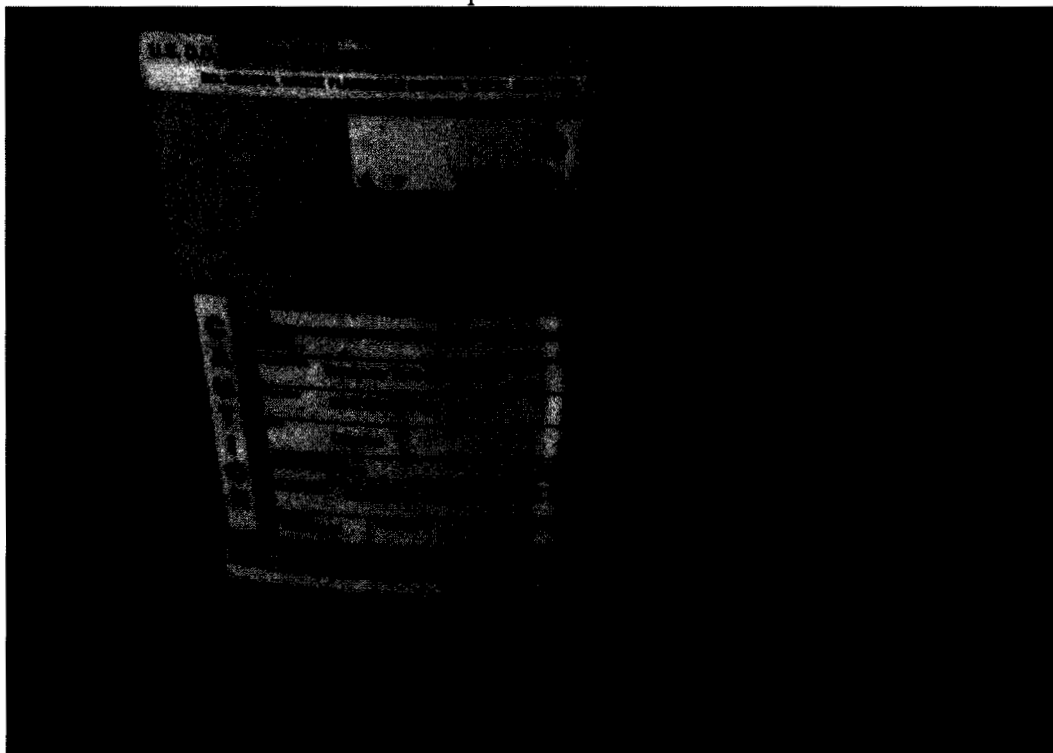


Photo 13: Label on Photo 9 rear right drum



Photo 14: Rolling cart found in Acid Storage Room with materials removed from labs

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Inspection Date 7/30/13

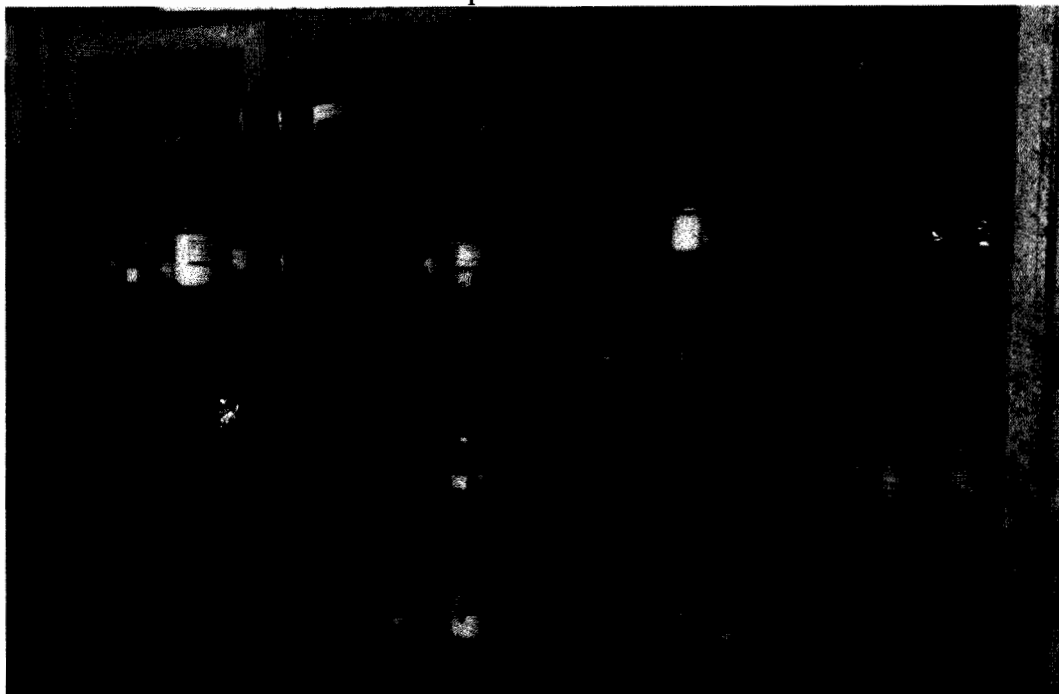


Photo 15: Cabinets in Acid Storage Room containing many older materials



Photo 16: Additional cabinets containing lab chemicals in Acid Storage Room

Photographic Log
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Inspection Date 7/30/13



Photo 17: Four wastewater aboveground storage tanks (ASTs) in Equipment Room



Photo 18: View of piping system for ASTs in Equipment Room

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Photo 19: Waste can of "Uline Fast Track Adhesive" found in Maintenance Room bucket



Photo 20: Overall view of Photo 19 bucket – open and unlabeled

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Inspection Date 7/30/13



Photo 21: One in-use aerosol can found on shelf in Maintenance Room



Photo 22: HW storage area in Final Warehouse

Photographic Log
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Inspection Date 7/30/13



Photo 23: 55gal drums at rear of Photo 22, right aisle

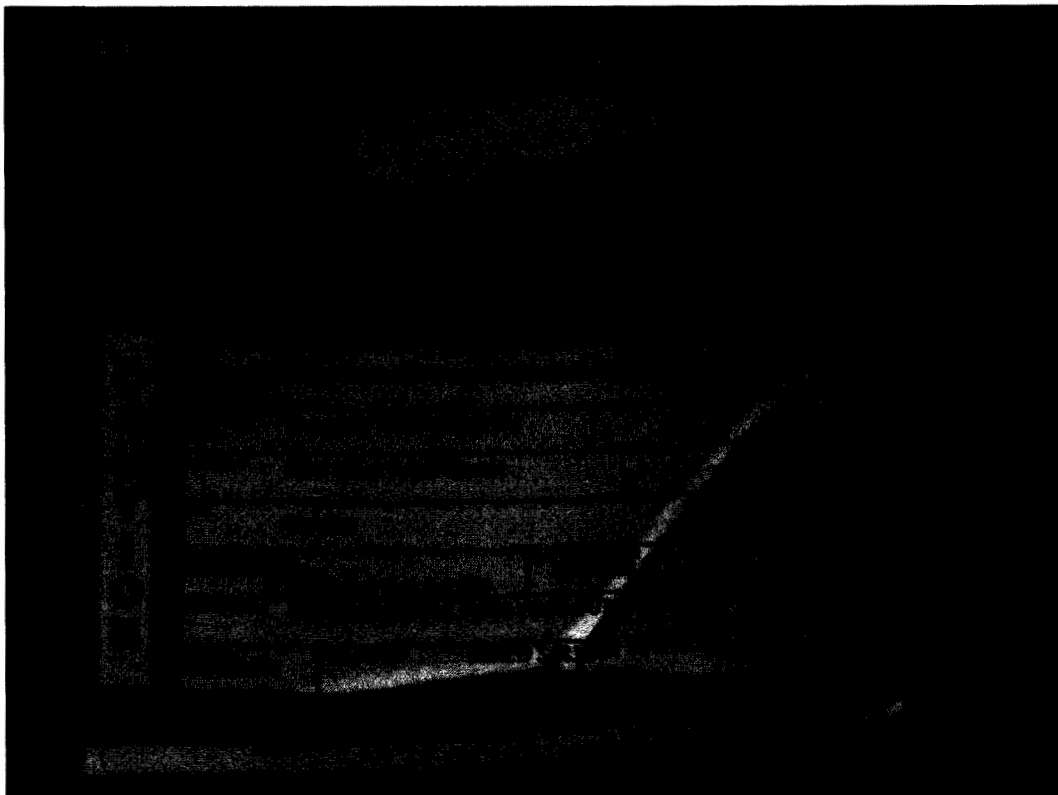


Photo 24: Label on Photo 23 center right drum – no date

Photographic Log
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Photo 25: Three 55gal drums at front of right aisle in Photo 22 – no labels or dates



Photo 26: 55gal drums at rear of right aisle – could not see label on middle two

Photographic Log
Norquay Technology Incorporated PAD982363889
Inspection Date 7/30/13

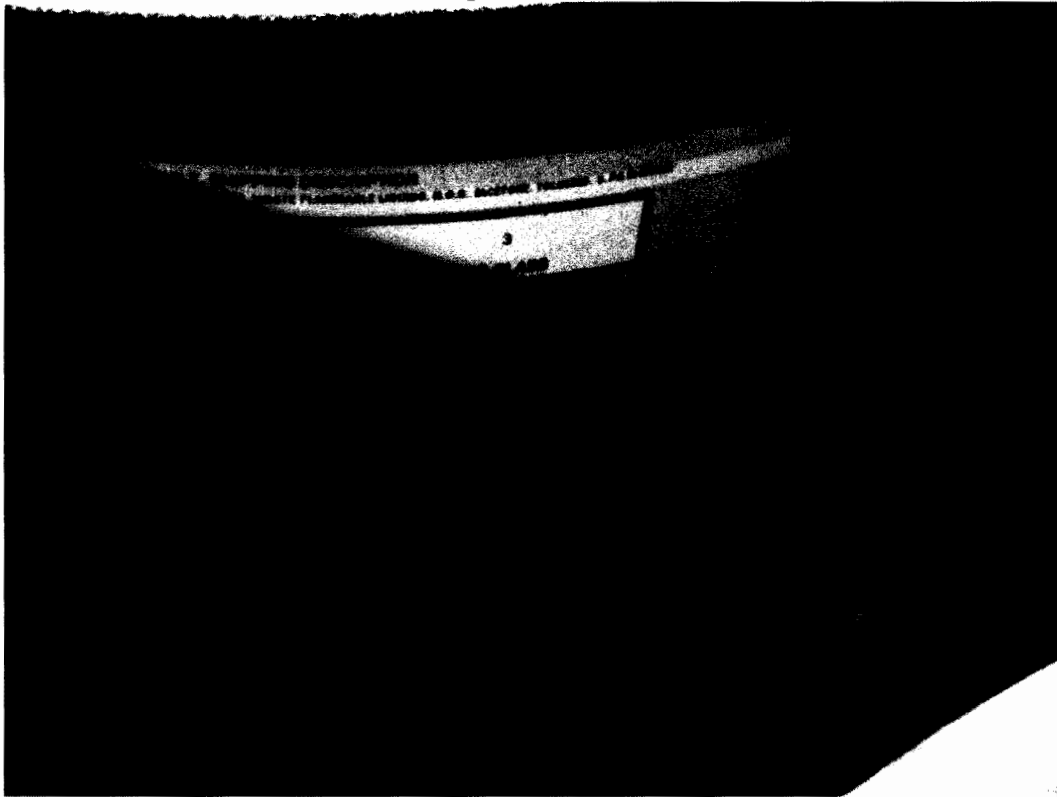


Photo 27: Label on 55gal drum at rear of left aisle – no date

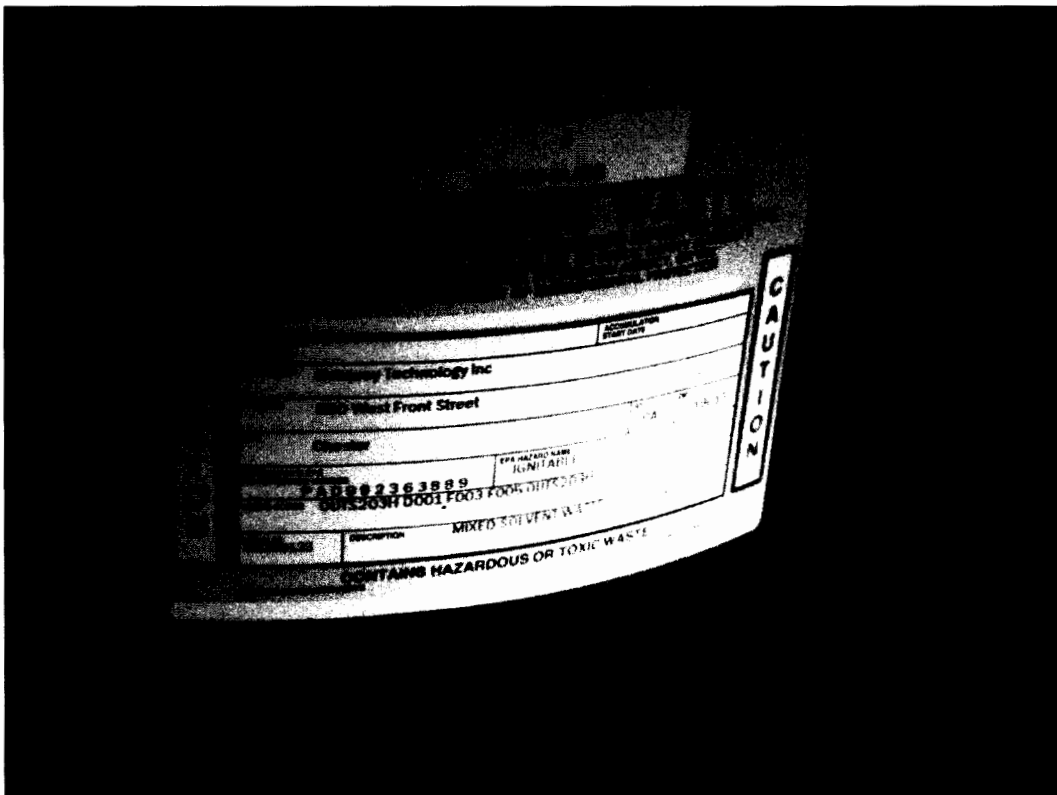


Photo 28: Label on additional 55gal drum at rear of left aisle – no date

Photographic Log
Norquay Technology Incorporated PAD982363889
Inspection Date 7/30/13



Photo 29: Label on 55gal drum at rear of left aisle – couldn't tell if month is "7" or "4"

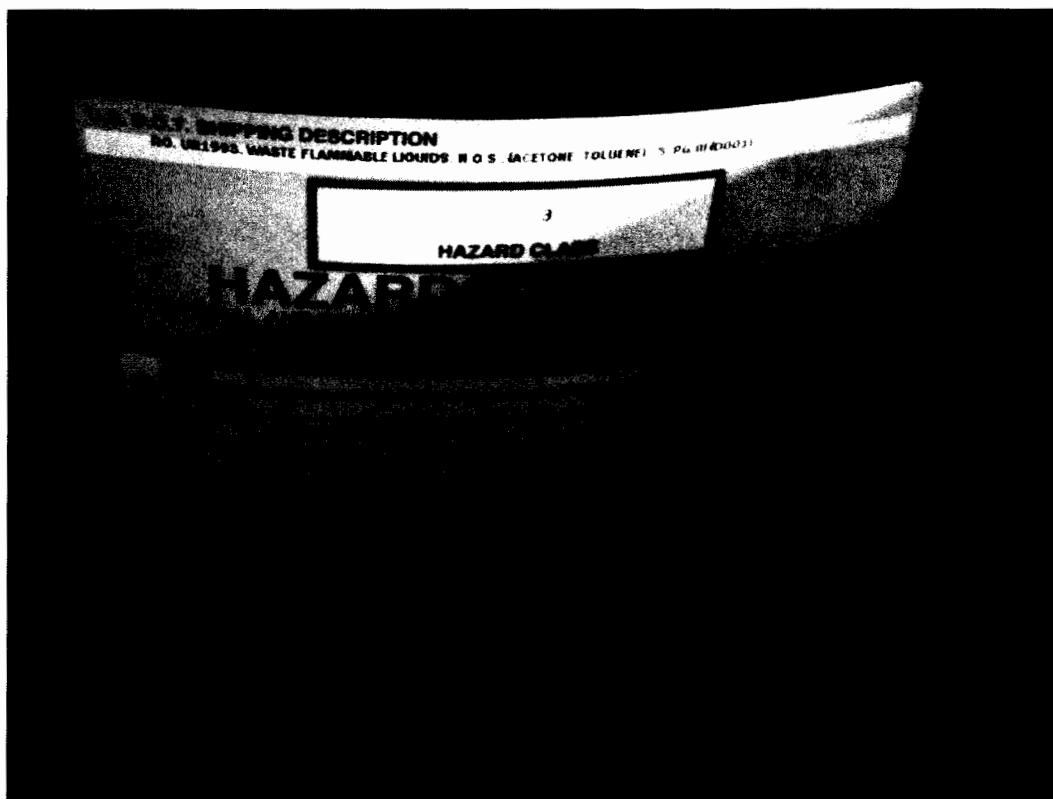


Photo 30: Label on additional 55gal drum at rear of left aisle – no date

Photographic Log
Norquay Technology Incorporated PAD982363889
Inspection Date 7/30/13



Photo 31: Label on additional 55gal drum at rear of left aisle – no date



Photo 32: Label on 55gal drum at middle of left aisle – no date

Photographic Log
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Photo 33: Label on additional 55gal drum at middle of left aisle – no date

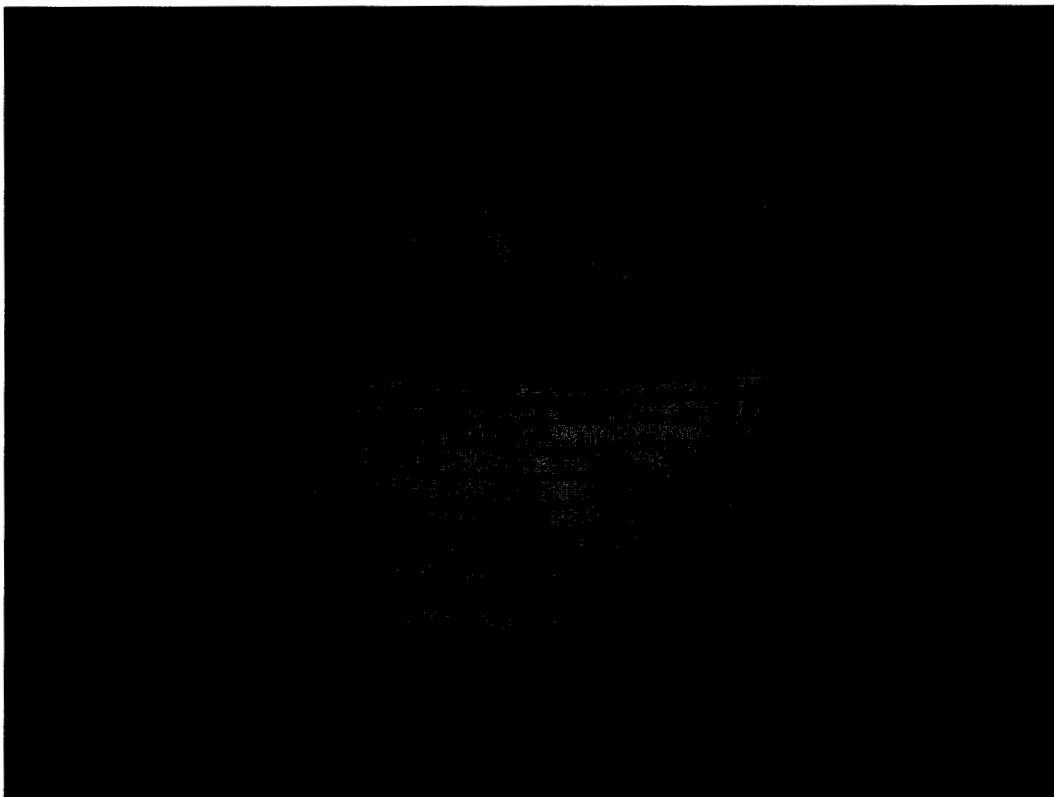


Photo 34: Label on 55gal drum at front of left aisle – no date

Photographic Log
Norquay Technology Incorporated PAD982363889
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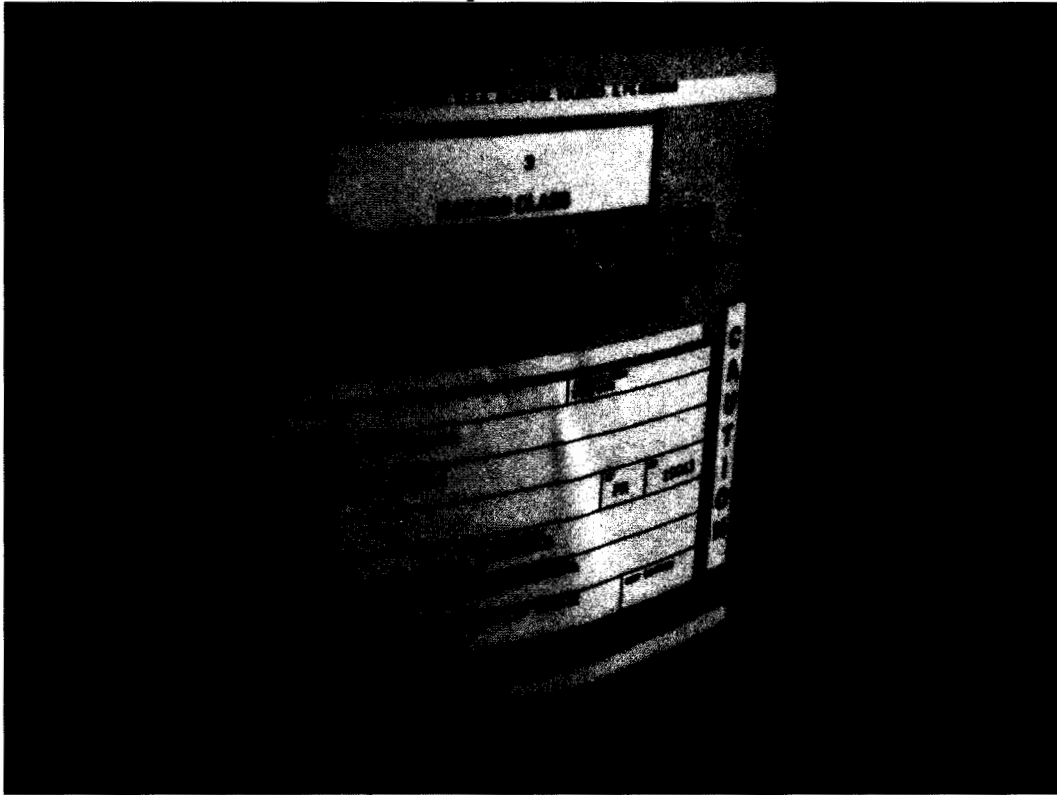


Photo 35: Label on additional 55gal drum at front of left aisle – no date



Photo 36: View of left aisle – couldn't see labels on three drums at center

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Photo 37: Four ~20gal containers on side of left drum aisle, all labeled "Malononitrile" and "Poison"



Photo 38: Corroded container found along side of left drum aisle

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Photo 39: Broken, unlabeled container found along side of left drum aisle



Photo 40: Several fiber containers found along side of left drum aisle, labeled as "Poisonous Solids" and "U.N. 2811"

Photographic Log
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Photo 41: View of Photo 40 container from above showing open lid



Photo 42: Label on Photo 41 container – last “Inventory Control” date is in 2005

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Photo 43: Open fiber container seen at upper right in Photo 41

Photographic Log
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Photo 44: Additional shot (no flash) of photo 43 label – last “Inventory Control” date is in 2009

Photographic Log
Norquay Technology Incorporated PAD982363889
Inspection Date 7/30/13



Photo 45: Overview of containers at rear of Photo 40

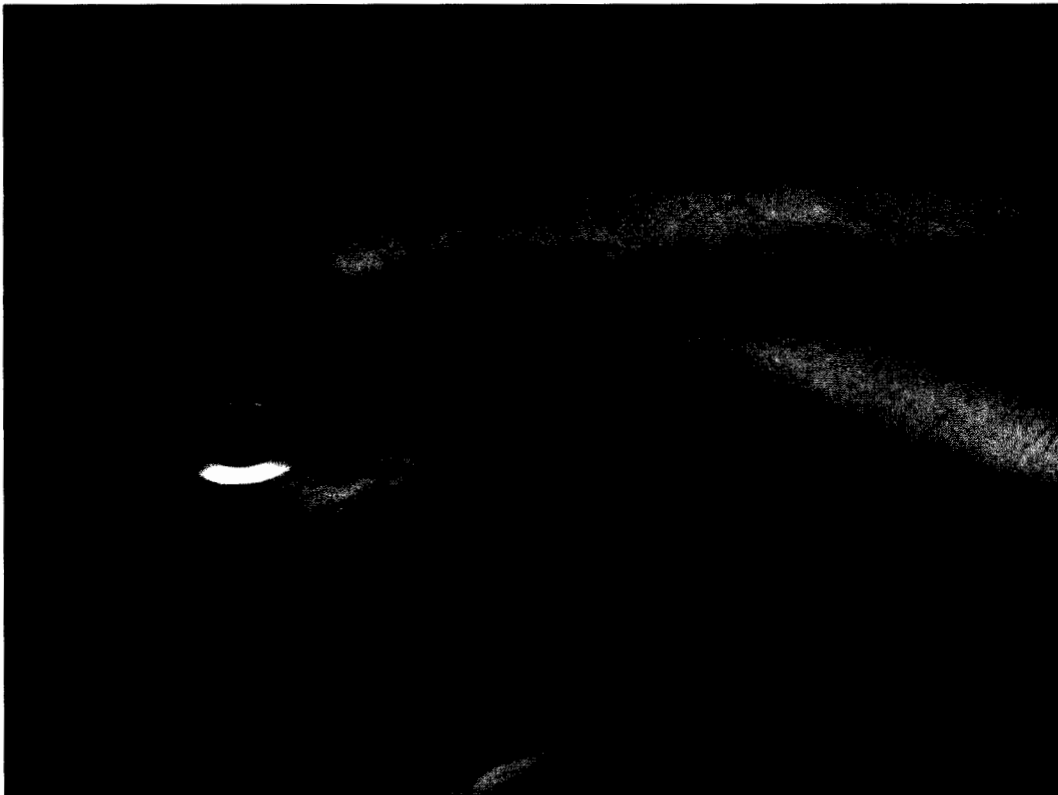


Photo 46: Top of container seen front left in Photo 40, with spent can of "Maintenance Choice" paint

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Photo 47: Four 55gal drums on additional pallet to left of main left aisle – front right drum has no label



Photo 48: One 55gal drum of HW found in separate "Quarantine Area" nearby

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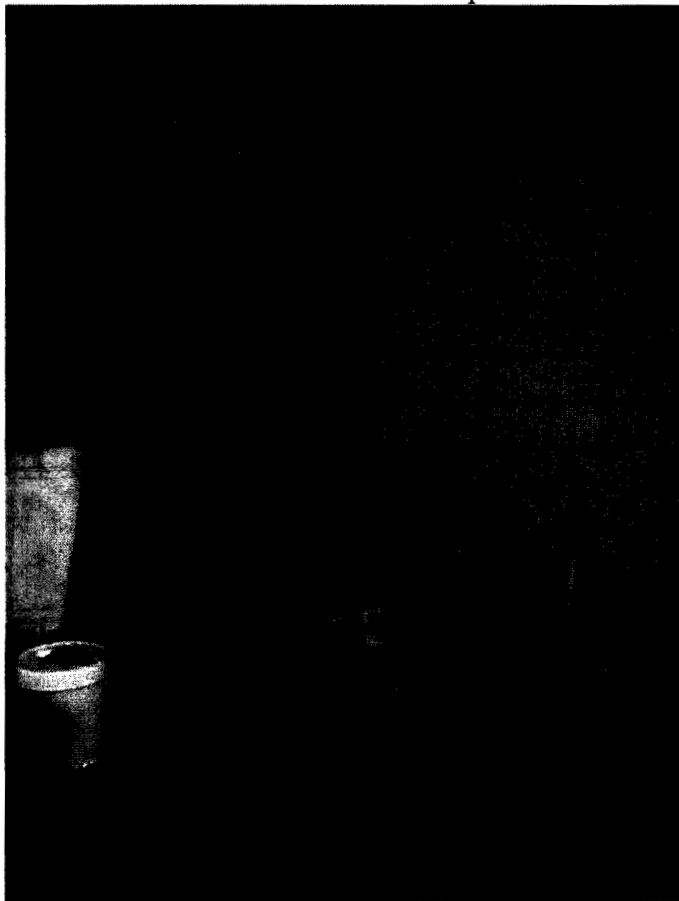


Photo 49: Used lamp storage on Final Warehouse – three boxes on left were open and not labeled

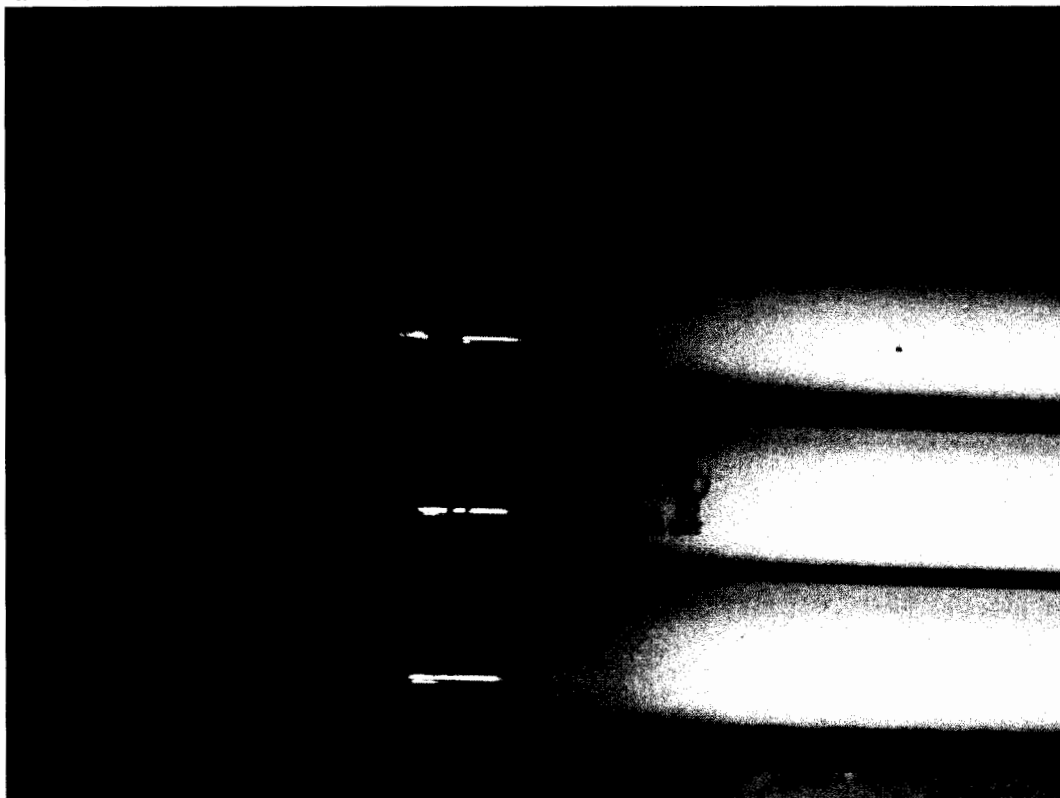


Photo 50: Loose spent lamps found behind Photo 49 boxes

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Photo 51: Additional open, unlabeled box of spent lamps found on ground behind Photo 49 boxes, with loose lamps coming out



Photo 52: 4L HW collection bottle in QC Lab with open funnel

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Inspection Date 7/30/13

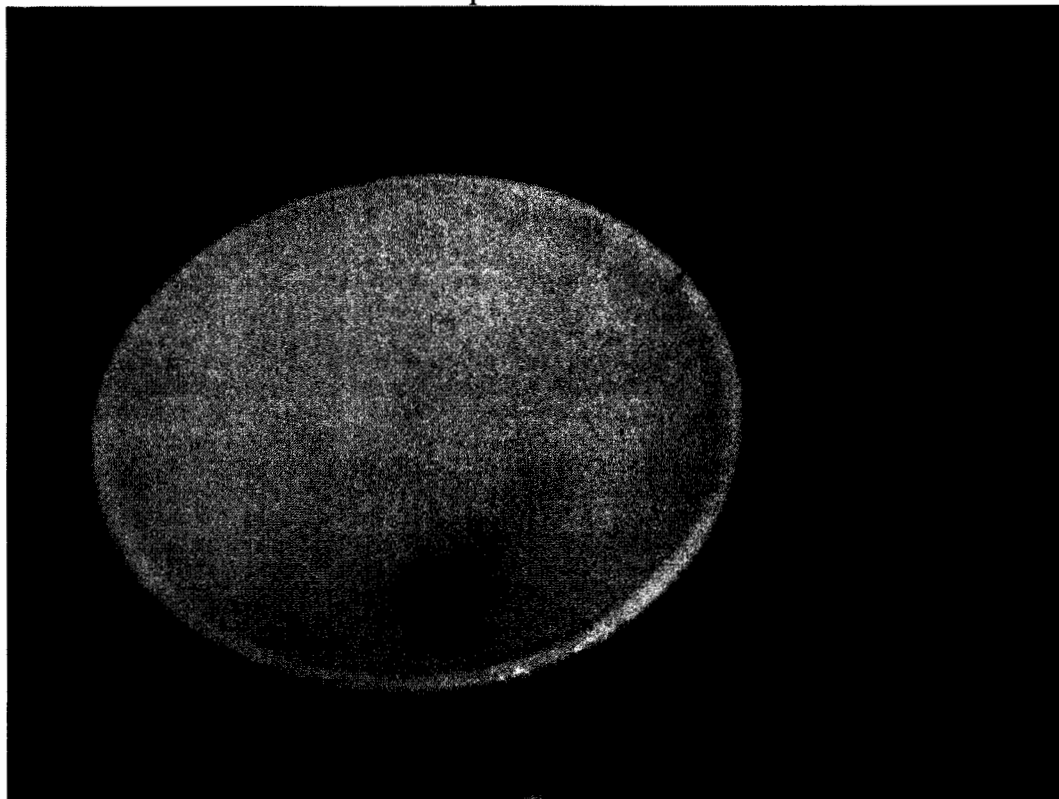


Photo 53: View into funnel from Photo 52